

AMENDMENTS TO THE CLAIMS

Please cancel claims 2-7, 9, 14, 16 and 17 without prejudice.

1. (CURRENTLY AMENDED) An apparatus comprising:

a first circuit configured to generate a decoded video signal and syntax elements in response to an encoded bitstream; and

a second circuit configured to generate one or more overlay images in response to said syntax elements, wherein (a) said one or more overlay images are displayed overlaying a corresponding decoded video image, (b) said one or more overlay images comprise one or more graphic symbols representing said syntax elements of said encoded bitstream and (c) said one or more overlay images comprise at least one image selected from the group consisting of

(i) an image displaying statistics about said decoded video signal including resolution, frame rate, bit rate, a bit rate graph, bitstream errors, peak signal to noise ratio (PSNR), average PSNR and a PSNR graph, wherein one or more scales of said bit rate graph and said PSNR graph are dynamically adjusted to display minimum and maximum values,

(ii) an image displaying a grid representing a number of macroblocks of said decoded video image, wherein for each macroblock a graphic symbol representing partitioning and encoding information for the respective macroblock is shown,

(iii) an image displaying a grid representing a number of macroblocks of said decoded video image, wherein for each macroblock a graphic symbol representing a macroblock size parameter for the respective macroblock and a number representing a quantization parameter for the respective macroblock are shown, and

(iv) an image displaying a grid representing a number of macroblocks of said decoded video image, wherein for each macroblock a graphic symbol representing a macroblock level adaptive frame/field (MBAFF) coding mode of the respective macroblock is shown.

2. (CANCELLED) .

3. (CANCELLED) .

4. (CANCELLED) .

5. (CANCELLED) .

6. (CANCELLED) .

7. (CANCELLED) .

8. (CURRENTLY AMENDED) The apparatus according to claim 1, wherein said second circuit is further configured to generate one or more overlay images further comprise one or more of a main window configured to display said decoded video signal and
5 said one or more overlay images, a statistics window, a legend window and a bit value window.

9. (CANCELLED).

10. (CURRENTLY AMENDED) The apparatus according to claim 9 1, wherein said ~~one or more overlay images further comprise~~ (ii) ~~one or more~~ graphic symbols representing ~~one or more of a~~ partitioning and encoding information for each respective
5 macroblock type, a submacroblock type and a prediction direction comprise a square illustrating partitions of the respective macroblock.

11. (CURRENTLY AMENDED) The apparatus according to claim ~~10~~ 1, wherein said graphic symbols representing partitioning and encoding information for each respective macroblock are color coded.

12. (CURRENTLY AMENDED) The apparatus according to claim 9 1, wherein said ~~one or more overlay images further comprise~~

~~one or more graphic symbols~~ macroblock size parameter is displayed
as a solid rectangle representing a number of bits used to encode
syntax elements of the respective ~~each~~ macroblock in said decoded
video signal.

13. (CURRENTLY AMENDED) The apparatus according to
claim 12 9, wherein a size of said ~~one or more overlay images~~
~~further comprise one or more graphic symbols representing~~ solid
rectangle represents a relative size of the respective ~~each~~
macroblock in said decoded video image ~~signal~~.

14. (CURRENTLY AMENDED) The apparatus according to
claim 1, wherein said ~~one or more overlay images further comprise~~
~~graphic symbols representing a reference index~~ quantization
parameter for each macroblock in said decoded video ~~signal~~ image is
displayed as an integer value in a range from 0 to 51.

15. (CURRENTLY AMENDED) The apparatus according to
claim 1, wherein said ~~one or more overlay images further comprise~~
~~one or more~~ graphic symbols representing a macroblock level
adaptive frame field (MBAFF) coding mode of each respective
macroblock comprise a lower case letter to represent a field mode
parameter.

16. (CANCELLED).

17. (CANCELLED).

18. (ORIGINAL) The apparatus according to claim 1, further comprising a compositing circuit configured to generate a composite video signal in response to said decoded video signal and said one or more overlay images.

19. (ORIGINAL) The apparatus according to claim 1, wherein said first circuit is configured to convert from a YUV format to an RGB format and upscale said decoded video signal to a desired size and aspect ratio.

20. (ORIGINAL) The apparatus according to claim 18, wherein said compositing circuit is configured to store said composite decoded video signal in a picture memory of a video card.

21. (ORIGINAL) The apparatus according to claim 1, wherein said encoded bitstream comprises an H.264 compliant bitstream.

22. (CURRENTLY AMENDED) An apparatus comprising:

means for generating a decoded video signal and syntax elements in response to encoded bitstream; and

means for generating one or more overlay images in response to said syntax elements, wherein (a) said one or more overlay images are displayed overlaying a corresponding decoded video image, (b) said one or more overlay images comprise one or more graphic symbols representing said syntax elements of said encoded bitstream and (c) said one or more overlay images comprise at least one image selected from the group consisting of

(i) an image displaying statistics about said decoded video signal including resolution, frame rate, bit rate, a bit rate graph, bitstream errors, peak signal to noise ratio (PSNR), average PSNR and a PSNR graph, wherein one or more scales of said bit rate graph and said PSNR graph are dynamically adjusted to display minimum and maximum values,

(ii) an image displaying a grid representing a number of macroblocks of said decoded video image, wherein for each macroblock a graphic symbol representing partitioning and encoding information for the respective macroblock is shown,

(iii) an image displaying a grid representing a number of macroblocks of said decoded video image, wherein for each macroblock a graphic symbol representing a macroblock size parameter for the respective macroblock and a number

25 representing a quantization parameter for the respective
macroblock are shown, and

(iv) an image displaying a grid representing a
number of macroblocks of said decoded video image, wherein for
each macroblock a graphic symbol representing a macroblock
30 level adaptive frame/field (MBAFF) coding mode of the
respective macroblock is shown.

23. (CURRENTLY AMENDED) A method for analyzing a
decoded video signal comprising the steps of:

 generating a decoded video signal and syntax elements in
response to encoded bitstream; and

5 generating one or more overlay images in response to said
syntax elements, wherein (a) said one or more overlay images are
displayed overlaying a corresponding decoded video image, (b) said
one or more overlay images comprise one or more graphic symbols
representing said syntax elements of said encoded bitstream and (c)
10 said one or more overlay images comprise at least one image
selected from the group consisting of

(i) an image displaying statistics about said
decoded video signal including resolution, frame rate, bit
rate, a bit rate graph, bitstream errors, peak signal to noise
15 ratio (PSNR), average PSNR and a PSNR graph, wherein one or

more scales of said bit rate graph and said PSNR graph are dynamically adjusted to display minimum and maximum values,

20 (ii) an image displaying a grid representing a number of macroblocks of said decoded video image, wherein for each macroblock a graphic symbol representing partitioning and encoding information for the respective macroblock is shown,

25 (iii) an image displaying a grid representing a number of macroblocks of said decoded video image, wherein for each macroblock a graphic symbol representing a macroblock size parameter for the respective macroblock and a number representing a quantization parameter for the respective macroblock are shown, and

30 (iv) an image displaying a grid representing a number of macroblocks of said decoded video image, wherein for each macroblock a graphic symbol representing a macroblock level adaptive frame/field (MBAFF) coding mode of the respective macroblock is shown.

Please add the following new claims:

24. (NEW) The method according to claim 23, wherein said macroblock size parameter represents the number of bits used to encode the syntax elements of the macroblock.

25. (NEW) The method according to claim 23, wherein said macroblock size parameter is displayed as a solid rectangle.

26. (NEW) The method according to claim 25, wherein said rectangle is color coded.

27. (NEW) The method according to claim 25, wherein a size of the solid rectangle is representative of a relative size of the corresponding macroblock.

28. (NEW) The method according to claim 25, wherein the size of the solid rectangle is determined relative to a minimum macroblock size and a maximum macroblock size within said decoded video image.

29. (NEW) The method according to claim 23, wherein said quantization parameter for the respective macroblock has a value in a range from 0 to 51.

30. (NEW) The method according to claim 23, wherein said quantization parameter is displayed as an integer number.

31. (NEW) The apparatus according to claim 1, wherein said second circuit is further configured to generate all four

images of said group and each of the images of said group is displayed in response to selection via a graphical user interface (GUI).